

CLAIMS

1. A flexible tubular pipe (1) for transporting fluid in the field of offshore petroleum development, of the type comprising at least one impervious inner polymer sheath (3), one or more reinforcing layers formed from coils of reinforcing wires or of metallic strips or of long composite elements (4, 5, 6), at least one second polymer sheath such as an outer protective sheath (7) or an intermediate sheath (8), characterized in that said second polymer sheath is made of elastomeric thermoplastic polymer (TPE).

2. The flexible tubular pipe (1) as claimed in claim 1, characterized in that the thermoplastic block of the elastomeric thermoplastic polymer (TPE) is an olefin.

3. The flexible tubular pipe as claimed in claim 2, characterized in that the thermoplastic block of the elastomeric thermoplastic polymer (TPE) is a crosslinkable grafted olefin.

4. The flexible tubular pipe (1) as claimed in any one of the preceding claims, characterized in that the thermoplastic block used to form the elastomeric thermoplastic polymer (TPE) is a polypropylene.

5. The flexible tubular pipe (1) as claimed in any one of the preceding claims, characterized in that the elastomer used to form the elastomeric thermoplastic polymer (TPE) is chosen from the following elastomers:

- SBS (styrene butadiene styrene)
- SEBS (styrene ethylene butadiene styrene)
- EPDM (ethylene propylene diene monomer)
- polybutadiene
- 5 - polyisoprene
- polyethylene-butylene

6. Flexible tubular pipe (1) as claimed in any one of the preceding claims, characterized in that the elastomeric thermoplastic polymer used to form the second polymer sheath
10 has a yield point stress σ_s of greater than 10 MPa.

7. The flexible tubular pipe (1) as claimed in any one of the preceding claims, characterized in that the elastomeric thermoplastic used to form the second polymer sheath has a resistance to thermal oxidation OIT at 210°C of greater than
15 20 minutes.

8. The flexible tubular pipe (1) as claimed in any one of the preceding claims, characterized in that the elastomeric thermoplastic used to form the second polymer sheath comprises anti-UV additives chosen such that its stability is
20 greater than 1500 hours (Xenotest).

9. The flexible tubular pipe (1) as claimed in any one of the preceding claims, characterized in that the second sheath made of elastomeric thermoplastic is formed by the outer protective sheath (7) of the pipe 1.

25 10. The flexible tubular pipe (1) as claimed in any one of the preceding claims, characterized in that the second sheath

made of elastomeric thermoplastic is formed by an intermediate sheath (8).